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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SCHATZ, CHRISTOPHER T

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

05/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,848	Applicant(s) KAWAMORI, YUJI	
	Examiner CHRISTOPHER SCHATZ	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 6-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/24/09</u> . | 6) <input type="checkbox"/> Other: _____ |

FINAL REJECTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 5 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 requires the extrusion rod to be "inserted from the rear end side to the tip side of the pump housing". The specification lacks support for such a limitation. The examiner appreciates the applicant's disclosure in section 72 of the published application stating that the rod is slidably inserted into the pump chamber. However, nothing in the specification as originally filed discloses that the rod is inserted from *the rear end side*. The "rear part" of the housing according to the specification and amended claim is the part of the housing to which the pipe connected to the applicator head is connected. The specification (figures 11 and 12) show the rod being inserted through a side different from the rear part to which said above pipe is connected. The applicant can overcome this rejection by amending the claim to recite "inserted from a top portion of the pump housing opposite the rear end side to the tip side end of the pump housing".

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3. Claim 1 as amended further recites “feeding the spacer forming material to the pump chamber by the extrusion rod being moved backward by extrusion pressure”. The specification as originally does not support feeding the material to the chamber by moving the extrusion rod backward. The applicant can overcome this rejection by amending the claim to recite “feeding the spacer forming material to the pump chamber by such that the extrusion rod ~~being~~ is moved backward by extrusion pressure”.

4. Claim 1 as amended further requires that the extrusion rod be moved forward to “cause the space forming material to pass through between the inner peripheral surface of the pump housing and the outer peripheral surface of the piston rod”. Nothing in the original specification discloses the material passing between such surfaces. Rather the specification only supports a method wherein the material is supplied to the applicator by moving the rod forward in the pump housing. Additionally, the original specification does not disclose a piston rod, nor does it disclose that the extrusion rod is a piston rod.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 5 and 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation “at the tip end of the pump housing” in line 8. There is insufficient antecedent basis for this limitation in the claim. It is recommended that the claim be amended to recite “at a tip end of a pump housing”.

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Line 9 of claim 1 states “the rear part”. There is insufficient antecedent basis for this limitation in the claim. It is recommended that the claim be amended to recite “a rear part”.

Line 12 of claim 1 recites the limitations “the rear end side to the tip side”. There is insufficient antecedent basis for this limitation in the claim. It is recommended that the claim be amended to recite “inserted from a top portion of the pump housing opposite the rear end side to the tip side end of the pump housing” to overcome both the 35 U.S.C. 112 first paragraph rejection and 35 U.S.C. 112 second paragraph rejection presented above.

Line 20 of claim 1 recites the limitation “the outer peripheral surface of the piston rod”. There is insufficient antecedent basis for this limitation in the claim. It is recommended that the applicant amend the claim to overcome both the 35 U.S.C. 112 first paragraph rejection and 35 U.S.C. 112 second paragraph rejection presented above.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Dewitte et al. (US 4957572).

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At the outset, the applicant is notified that lines 8-12 of claim 1 only recite structural limitations, and thus do not further limit the method. Lines 14-20 of claim 1 recite method limitations that incorporate some of the structural limitations recited in lines 8-12. Only the structure that is required to perform the method limitations further limits the claim.

Dewitte discloses a method of manufacturing double glazing having glass plates 1, 2, a spacer 3 disposed between peripheries of the glass plates (figure 1), and an air tightly sealed air space surrounded by the spacer between the glass plates (column 4, lines 12-23), the method using a spacer forming device including an applicator head 43 for applying a spacer forming material, and spacer forming material supply means 30 having an extruding means 31, 35 that extrudes the spacer forming material while melting and mixing the material and a fixed displacement pump in pump chamber 37 for supplying the spacer forming material extruded from the extruding means to the applicator head, said method comprising: feeding the spacer forming material to the pump chamber 37 by an extrusion rod 37 being moved backward by the extrusion pressure of the spacer forming material extruded from extruding means (column 8, lines 41-49, force feeding of extrusion filling chamber 37 as the extrusion rod moves back); supplying the spacer forming material fed into the pump chamber to the applicator head by the extrusion rod being moved forward to cause the spacer forming material to pass through between the inner peripheral surface of the pump housing defining chamber 37 and the outer peripheral surface of the extrusion rod (column 8, lines 31-39, material moves into space 49); applying the spacer forming material from

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the applicator head along the periphery of an upper surface of one of the glass plates thereon to form the spacer; and attaching by press the other one of the glass plates to the spacer (column 3, line 67 – column 5, line 13).

Dewitte discloses that the spacer material is thermoplastic.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over The Applicant's Admitted Prior Art in view of either of Dewitte et al.

The Applicant's Admitted Prior Art discloses a method of manufacturing double glazing having glass plates, a spacer disposed between peripheries of the glass plates, the method using a spacer forming device including an applicator head for applying a spacer forming material, and a spacer forming material supply means having an extruding means that extrudes the spacer forming material while melting and mixing the material head, the method comprising the steps of: applying the spacer forming material from the applicator head along the periphery of an upper surface of one of the glass plates thereon to form the spacer; and attaching by press the other one of the glass plates to the spacer (specification, section 4). It is noted that the disclosure in section 4

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necessarily requires a material source and an applicator head because the material must come from a certain source and the material cannot be applied to the periphery of a glass substrate without an applicator head.

Applicant's Admitted Prior Art is silent as to a method further comprising: using a fixed displacement pump for supplying the spacer forming material from the extruding means to the applicator head; feeding the spacer forming material to the pump chamber by an extrusion rod being moved backward by the extrusion pressure of the spacer forming material extruded from extruding means; supplying the spacer forming material fed into the pump chamber to the applicator head by the extrusion rod being moved forward to cause the space forming material to pass through between the inner peripheral surface of the pump housing defining chamber and the outer peripheral surface of the extrusion rod. Dewitte discloses a method as discussed in section 8 above. At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the method disclosed by applicant's Admitted Prior Art such that the method of the Admitted Prior Art performs the step required by lines 14-20 of claim 1 as taught by Dewitte above as doing such will form a spacer material of uniform, even thickness (Dewitt column 4, lines 26-37).

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dewitte as applied to claim 1 above, and further in view of Heinz et al. (US 4363426, newly cited)

Dewitte discloses a method as discussed in section 8 above but the reference is silent as to a method further comprising the spacer forming material being supplied to a

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second displacement pump connected in parallel with the first displacement pump while the spacer forming material from the first displacement pump is supplied to the application head. Heinz discloses a method of applying a resin, wherein two pumps are connected in parallel wherein one pump can dispense a resin material while the chamber of another pump is filled with resin material (figure 2; column 4, lines 3-37). At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Dewitte such that one pump can receive spacer material while another pump dispenses spacer material to the applicator head as taught by Heinz above as doing such allows the dispensing process to continue even if one pump fails.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in view of Dewitte as applied to claim 1 above, and further in view of Heinz et al. (US 4363426, newly cited)

The Admitted Prior and Dewitte disclose a method as discussed in section 10 above but the references are silent as to a method further comprising the spacer forming material being supplied to a second displacement pump connected in parallel with the first displacement pump while the spacer forming material from the first displacement pump is supplied to the application head. Heinz discloses a method of applying a resin, wherein two pumps are connected in parallel wherein one pump can dispense a resin material while the chamber of another pump is filled with resin material (figure 2; column 4, lines 3-37). At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the Admitted Prior Art as modified by Dewitte such that one pump can receive spacer material while another pump dispenses

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spacer material to the application head as taught by Heinzl above as doing such allows the dispensing process to continue even if one pump fails.

Response to Arguments

13. Applicant's arguments filed 02/24/2009 have been fully considered but they are not persuasive. With respect to Trpkovski, the applicant's arguments are moot. The applicant asserts that Dewitte fails to disclose the limitations of claim 1 as amended. The applicant is referred to section 8 above. Applicant's arguments with respect to claim 14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER SCHATZ whose telephone number is 571-272-6038. The examiner can normally be reached on Monday through Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER SCHATZ/
Examiner, Art Unit 1791

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791

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